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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,963	06/29/2001	Young Tae Yang	8733.441.00	6103
30827	7590	10/31/2005	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			NORRIS, JEREMY C	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	
			2841	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/893,963

Applicant(s)

YANG ET AL.

Examiner

Jeremy C. Norris

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/05/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The Examiner notes that Applicants have previously filed a preliminary amendment before the issuance of a first Office Action that was not considered by the Office. Therefore, the previous Final Office Action is hereby **vacated**, and all claims have been examined on the merits.

### ***Allowable Subject Matter***

The indicated allowability of claims 3 and 5-7 is withdrawn in view of the new interpretation of US 5,917,158 (Takao). Rejections based on the new interpretation follow.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,748,293 (hereafter Kikuchi).

Kikuchi discloses, referring to figures 2a-c, a flexible circuit film, comprising: a body (11); a first pad (2) provided at one end of the body to be adhesively connected to a pad of a first printed circuit board a second pad provided at other end of the body to be engaged to a connector of a second printed circuit board and least one recess (10) defined in the body [claim 1] wherein the recess is defined in the body in a region

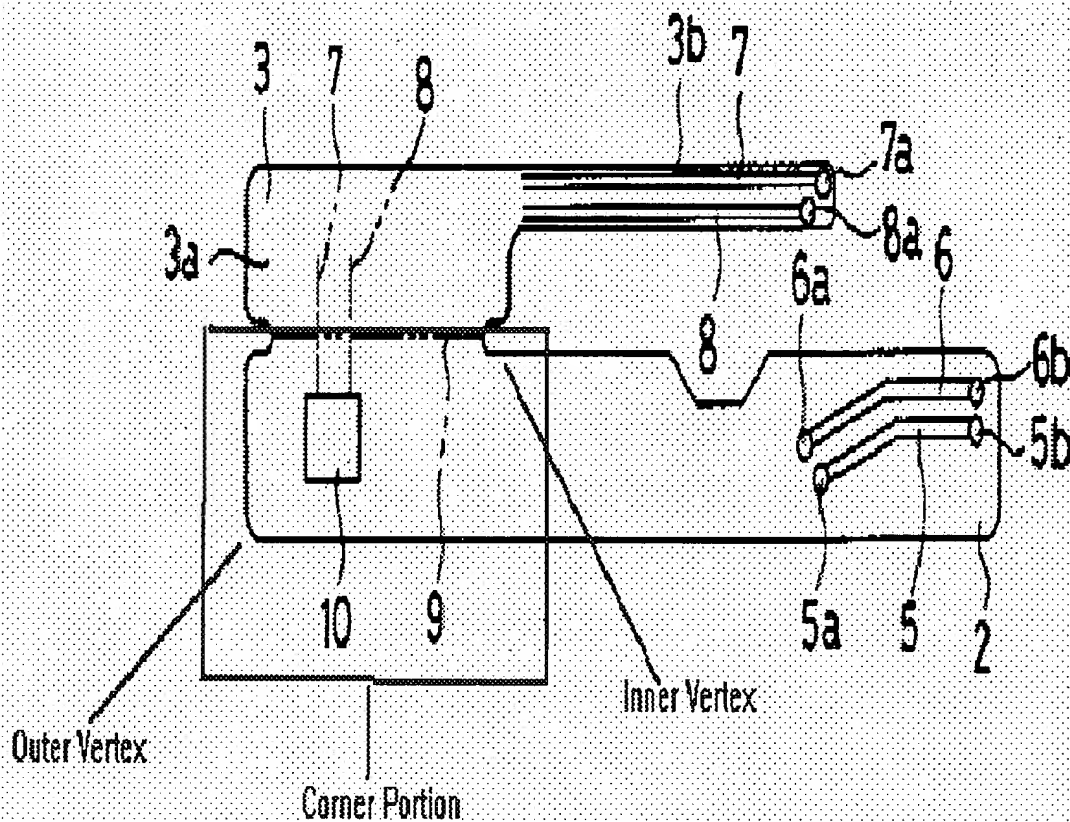
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adjacent to second pad [claim 2], wherein the body has at least one bent portion (portion near reference character 8 in figure 2a) [claim 4], wherein said at least one recess has a substantially concave shape [claim 8] wherein the at least one recess has a substantially curved shape [claim 9].

Claims 10-21 rejected under 35 U.S.C. 102(b) as being anticipated by US 5,917,158 (hereafter Takao).

Note, a marked up copy of figure 1 of Takao is provided below to assist in explanation.

**Fig. 1**



Takao discloses, referring to figures 1 & 2, a flexible circuit film, comprising: a body; a first pad (7a) provided at one end of the body to be adhesively connected to a pad of a first printed circuit board a second pad (6b) provided at other end of the body to be engaged to a connector of a second printed circuit board and least one force

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absorbing recess (under reference character 3a) defined in the body [claim 1], wherein the recess is defined in at least two side surfaces of the body in the region adjacent to the second pad [claim 3], wherein the body has at least one bent portion (portion near reference character 9) [claim 4], the body having at least two side surfaces wherein the at least one recess is defined at each of the at least two side surfaces in a region adjacent to the bent portion [claim 5], wherein a first recess is defined at the bent portion and said at least one recess is defined in the body in a region adjacent to the second pad [claim 6], wherein said at least one recess is defined at the bent portion [claim 7], wherein the body having at least two side surfaces wherein the at least one recess is defined at a region adjacent to the bent portion [claim 22], wherein the concave shape is greater than a semicircle [claim 23], wherein the concave shape has a shape of an incomplete circle [claim 24], wherein the one recess includes a cutout portion [claim 25].

Similarly, Takao discloses, referring to figures 1 & 2, a flexible printed circuit film comprising, a body having a first portion (2) and a second portion (3) the first portion intersecting the second portion to form a corner portion (the boxed portion outlined above), the corner portion having an inner vertex and an outer vertex (as noted in the marked-up figure above); a first pad (6b) connected at an end of the first portion; a second pad (7a) connected at an end of the second portion; and a first force absorbing recess (near reference character 9, under reference character 3a, or under reference 8) in the body [claim 10], wherein the first recess has a substantially concave shape [claim 11], wherein the first recess has a substantially curved shape [claim 12], wherein the

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first portion is substantially perpendicular to the second portion [claim 13], wherein the first recess is at the inner vertex of the corner portion [claim 14], further comprising a second recess (under reference character 3a) in a region of the second portion of the body, the region being between the outer vertex of the corner portion and the second pad [claim 15], wherein the second recess has a substantially concave shape [claim 16], wherein the second recess has a substantially curved shape [claim 17], wherein the first recess (under reference character 8) is at a region between the inner vertex and the second pad [claim 18], further comprising a second recess (under reference character 3a) in a region between the outer vertex of the corner portion and the second pad [claim 19], wherein the second recess has a substantially concave shape [claim 20], wherein the second recess has a substantially curved shape [claim 21], wherein the first recess includes a cutout portion [claim 26], wherein the concave shape is greater than a semicircle [claims 27, 29, 31], wherein the concave shape has a shape of an incomplete circle [claims 28, 30, 32], wherein the second recess has a substantially curved shape [claim 33].

Moreover, Takao discloses, a printed circuit film comprising: a body having a first portion (3) and a second portion (2); a first pad (7a) connected to the first portion; a second pad (6b) connected to the second portion; and at least one recess portion (under reference character 3a) in the body [claim 34], wherein the recess portion includes a cutout portion [claim 35].

### ***Response to Arguments***

Applicant's arguments filed 8 March 2005 have been fully considered but they are not persuasive. Applicants have argued that neither Kikuchi nor Takao disclose a "force absorbing recess". Applicants have provided no special technical definition in the instant specification for this phrase, thus the Examiner must give the phrase the plain meaning of the words in the phrase, thus interpreting "force absorbing recess" as a recess which absorbs a force of some kind. In the case of Kikuchi, Kikuchi specifically discloses that the recess 10 are holes for attaching set screws therein (see col. 1, lines 25-35 and col. 3, lines 40-55). Screws, by their very nature apply a force to whatever hole they are located in. Therefore, the assertion that the holes (10) in Kikuchi do **not** comprise a force absorbing recess are simply untenable. In the case of Takao, since the recess, located under reference character 3a as shown in figure 1, is located on the folding line 9, it is inherent that a force is applied to this area. Since this recess does indeed absorb this force, it is clear that Takao discloses a "force absorbing recess". Since it is the Examiner's position that Applicants' sole contention is indeed disclosed in the applied references, the traversal of the rejection on this ground is deemed unsuccessful.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents disclose flexible circuit boards having force absorbing recesses:

US 4,587,719      Barth,



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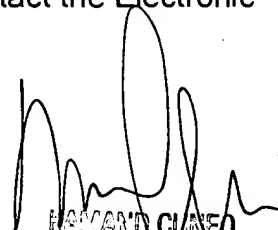
US 5,903,440      Blazier et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCSN



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